UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

| APPLICATION NO.      | FILING DATE                        | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |  |
|----------------------|------------------------------------|----------------------|---------------------|------------------|--|
| 10/565,595           | 06/29/2006                         | Takeshi Arakawa      | 285137US0XPCT       | 2247             |  |
|                      | 7590 09/29/200<br>AK, MCCLELLAND 1 | EXAMINER             |                     |                  |  |
| 1940 DUKE STREET     |                                    |                      | MOSHER, MARY        |                  |  |
| ALEXANDRIA, VA 22314 |                                    |                      | ART UNIT            | PAPER NUMBER     |  |
|                      |                                    | 1648                 |                     |                  |  |
|                      |                                    |                      |                     |                  |  |
|                      |                                    |                      | NOTIFICATION DATE   | DELIVERY MODE    |  |
|                      |                                    |                      | 09/29/2008          | ELECTRONIC       |  |

## Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com oblonpat@oblon.com jgardner@oblon.com

| Office Action Summary  |  | Application   | ication No. Applicant(s)   |  |              |  |  |  |
|--|--|---|--|--|--------------|--|--|--|
|  |  | 10/565,59   | 95   | ARAKAWA ET AL.   |              |  |  |  |
|  |  | Examiner  |  | Art Unit   |              |  |  |  |
|  |  |   | osher, Ph.D.   | 1648   |              |  |  |  |
| Period fo  | The MAILING DATE of this communication or Reply  | n appears on the  | cover sheet with the c   | correspondence ac  | idress       |  |  |  |
| WHIC<br>- Exter<br>after<br>- If NC<br>- Failu<br>Any  | ORTENED STATUTORY PERIOD FOR REPUES IS LONGER, FROM THE MAILIN asions of time may be available under the provisions of 37 CI SIX (6) MONTHS from the mailing date of this communication of period for reply is specified above, the maximum statutory per to reply within the set or extended period for reply will, by reply received by the Office later than three months after the ed patent term adjustment. See 37 CFR 1.704(b). | IG DATE OF THE<br>FR 1.136(a). In no even<br>on.<br>period will apply and w<br>statute, cause the app | IIS COMMUNICATION ent, however, may a reply be tin II expire SIX (6) MONTHS from lication to become ABANDONE | N. nely filed the mailing date of this of D (35 U.S.C. § 133). | •            |  |  |  |
| Status   |  |   |  |  |              |  |  |  |
| 1)⊠  | Responsive to communication(s) filed on  | 6/30/08   |  |  |              |  |  |  |
| '=   | •  | This action is n  | on-final.  |  |              |  |  |  |
| 3)   | Since this application is in condition for all   | '   |  | secution as to the   | e merits is  |  |  |  |
| - , <b></b>  | closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.  |   |  |  |              |  |  |  |
| Dispositi  | ion of Claims  |   |  |  |              |  |  |  |
| 4)🛛  | Claim(s) 1-20 is/are pending in the applica  | ation.  |  |  |              |  |  |  |
| -  | 4a) Of the above claim(s) is/are withdrawn from consideration.   |   |  |  |              |  |  |  |
|  | 5) Claim(s) is/are allowed.  |   |  |  |              |  |  |  |
|  | Claim(s) is/are rejected.  |   |  |  |              |  |  |  |
|  | Claim(s) is/are objected to.   |   |  |  |              |  |  |  |
| •  | 8) Claim(s) 1-20 are subject to restriction and/or election requirement.   |   |  |  |              |  |  |  |
| Applicati  | ion Papers   |   |  |  |              |  |  |  |
| 9)□  | The specification is objected to by the Exa  | miner.  |  |  |              |  |  |  |
| •  | The drawing(s) filed on is/are: a)   |   | objected to by the I   | Examiner.  |              |  |  |  |
| <i>′</i> —   | Applicant may not request that any objection to  | · ·   |  |  |              |  |  |  |
|  |  | • , ,   | •  | * ,  | FR 1.121(d). |  |  |  |
| Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152. |  |   |  |  |              |  |  |  |
| Priority ι   | under 35 U.S.C. § 119  |   |  |  |              |  |  |  |
| 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of:   |  |   |  |  |              |  |  |  |
|  | 1. Certified copies of the priority docur  | ments have bee  | n received.  |  |              |  |  |  |
|  | 2. Certified copies of the priority docur  | ments have bee  | n received in Applicati  | on No  |              |  |  |  |
|  | 3. Copies of the certified copies of the   | priority docume   | ents have been receive   | ed in this National  | Stage        |  |  |  |
|  | application from the International B   | ureau (PCT Rul  | e 17.2(a)).  |  |              |  |  |  |
| * See the attached detailed Office action for a list of the certified copies not received.   |  |   |  |  |              |  |  |  |
|  |  |   |  |  |              |  |  |  |
| Attachmen  |  |   | _  |  |              |  |  |  |
|  | ee of References Cited (PTO-892)   |   | 4) Interview Summary   |  |              |  |  |  |
| 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) Information Disclosure Statement(s) (PTO/SB/08)  Paper No(s)/Mail Date  Notice of Informal Patent Application  |  |   |  |  |              |  |  |  |
|  | r No(s)/Mail Date  |   | 6) Other:  | 11   |              |  |  |  |
|  |  |   |  |  |              |  |  |  |

## **DETAILED ACTION**

## Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-6, 14-17, 18, 19-20 drawn to heteropentamer product.

Group II, claim(s) 7-13, 14-17, 19-20, drawn to homopentamer product.

The inventions listed as Groups I-II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The only technical feature common to the groups is a fusion protein comprising an antigenic sequence and a monomer of a mucous membrane-binding protein. This common feature was known in the prior art, see for example US 5589384 (which is the U.S. equivalent of JP 6-206900, cited in the international application). Therefore the common feature does not make a contribution over the prior art, and does not constitute a special technical feature.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

Application/Control Number: 10/565,595 Page 3

Art Unit: 1648

The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary E. Mosher, Ph.D. whose telephone number is 571-272-0906. The examiner can normally be reached on varying dates and times; please leave a message.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bruce Campell can be reached on 571-272-0974. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number: 10/565,595 Page 4

Art Unit: 1648

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mary E Mosher, Ph.D./ Primary Examiner, Art Unit 1648

9/22/08